



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,631	03/01/2004	Kurt R. Nielsen	12493/14	3083
757 7590 03/28/2008 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER				
BOS, STEVEN J				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
03/28/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/791,631

**Applicant(s)**

NIELSEN ET AL.

**Examiner**

Steven Bos

**Art Unit**

1793

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 40-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 7-2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31, 2007 has been entered.

It is noted that the status of 09/480,092 recited on instant pg. 1 needs to be updated to reflect that it is now US Patent 6,609,761.

Claims 40-78 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "recovery of sodium bicarbonate from a nahcolite deposit," does not reasonably provide enablement for recovery of sodium bicarbonate from any ore deposit primarily comprising sodium bicarbonate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The instant specification discloses useable temperatures and pressures for nahcolite containing ore only. Applicant states that instant para. 2 and 43 support nahcolite being primarily sodium bicarbonate. However that is not what is instantly claimed. In any event, ore that is "primarily sodium bicarbonate" is not the same as nahcolite because trona ore is also "primarily sodium bicarbonate." It is noted that

"Nahcolite: An ore containing primarily sodium bicarbonate (bicarb) as the water soluble salt" is not found in para. 43.

It is also noted that applicant's arguments are not commensurate in scope with the instant claims. Instant claims 40,71 recite "primarily comprising sodium bicarbonate" which is of different scope than the instantly argued "primarily sodium bicarbonate."

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 40-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosar '790 in view of Prats, et al.

Rosar teaches the instantly claimed process of recovering sodium bicarbonate solution by dissolving nahcolitic oil shale in a mining zone by injecting a hot aqueous liquid solution into a well in the mining zone at a temperature below about 250°F and a pressure below about 200 psig each of which overlaps that instantly disclosed due to the breadth of the word "about" and instant pg. 16 which refers to Fig. 6 for the mining zone operating pressure. See the abstract, Fig. 1, col. 9 and the claims.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Rosar may differ in that temperatures of at least 250°F are not stated.

Prats teaches a similar process as Rosar and teaches temperatures greater than 250°F, eg. 300°F, 350°F, to form hot aqueous solutions of sodium bicarbonate from nahcolite ore. See pp. 1080-1.

It would have been obvious to one skilled in the art to use temperatures greater than 250°F in the process of Rosar because Prats teaches that such temperatures may be used to form hot aqueous sodium bicarbonate solutions similar to those of Rosar.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Boesch*, 205 USPQ 215.

Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.

Applicant argues that Rosar teaches that the temperature of the solution withdrawn from the cavity is in the range of about 80-200°F thus the temperature range of the production solution in Rosar is significantly below the temperature required in amended claims 40 and 71.

However this argument is not commensurate in scope with instant claims 40,71, which do not recite or require a production solution temperature range but instead recite an injection temperature of at least 250°F. Rosar teaches injecting a hot aqueous liquid

solution into a well in the mining zone at a temperature below about 250°F which overlaps that instantly claimed, supra.

Applicant argues that Prats teaches the use of steam, not liquid water on pg. 1085.

However pg. 1078 of Prats teaches that hot water and steam were used to leach the nahcolite. The instant claims do not exclude the use of steam and the taught use of hot water and steam suggests that the hot water is liquid water and that it refers to the water disclosed on pp. 1080-1.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is 571-272-1350. The examiner can normally be reached on M-F, 9AM to 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven Bos/  
Primary Examiner  
Art Unit 1793

sjb